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The National Wildlife Research Center

USDA United States Department of Agriculture

Animal and Plant Health Inspection Service

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Miscellaneous Publication No. 1595

The National Wildlife Research Center

Providing Innovative Solutions to Human–Wildlife Conflicts

Welcome

Welcome to the National Wildlife Research Center (NWRC), the primary research facility within the Wildlife Services (WS) program of the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS). NWRC provides scientific information on wildlife, its habitat, and its relationship to agriculture and public safety. Here at the Center and at our nine field stations, specialists conduct scientific inquiries into the problems of wildlife damage and look for solutions to these problems.

NWRC seeks to protect wildlife from the adverse effects of human activities while also reducing the damage and hazards that wildlife causes to agriculture, forests, industry, and other areas of human involvement. The reconciliation of these two conflicting priorities is the challenge that NWRC scientists face today.

At the Center, we welcome the public, including students, legislators, scientists, agricultural producers, and other interested individuals. We encourage you to ask our employees questions.

NWRC field stations are strategically located throughout the United States to be near wildlife and habitats of primary interest.

Mission and Objectives

NWRC is the Federal institution devoted to resolving problems caused by the interaction of wild animals and society. The Center applies scientific expertise to the development of practical methods to resolve these problems and to maintain the quality of the environments shared with wildlife.

NWRC develops effective wildlife damage management methods by:

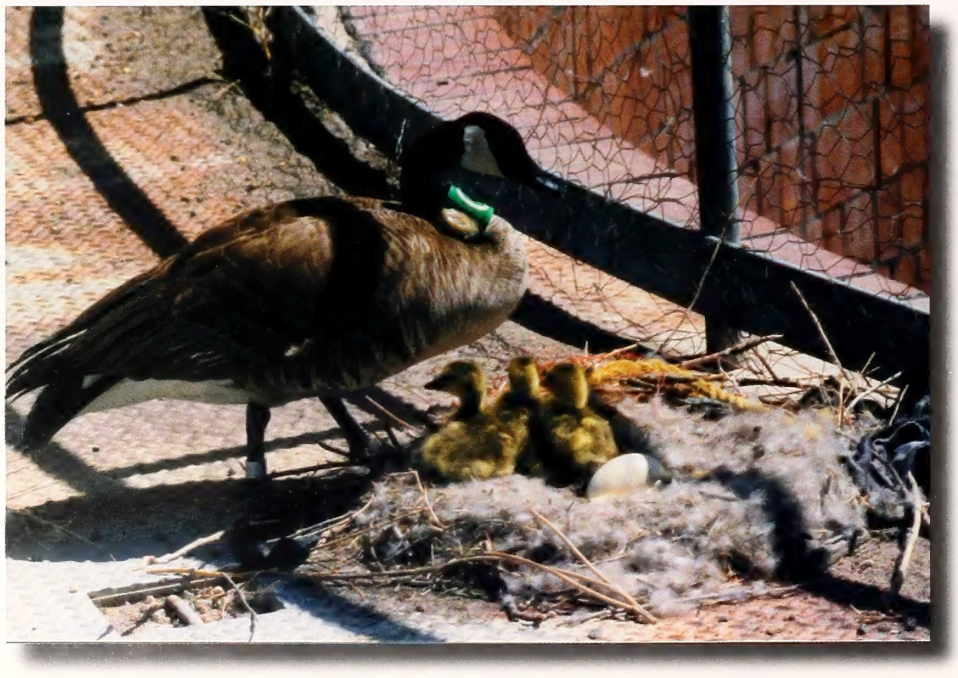
- Assessing damage and other problems caused by wildlife to agriculture, the environment, human health and safety, and endangered and threatened species;
- Investigating the biology, behavior, and ecology of problem animals;
- Evaluating the impact of wildlife management practices on wildlife and the environment;
- Developing and improving technology to reduce wildlife problems;
- Supporting registration of chemicals, vaccines, and drugs used to manage wildlife; and
- Transferring scientific and technical information.

NWRC scientists use many modern methods in their attempts to resolve conflicts between people and wildlife. (APHIS photo by Diana Dwyer.)

The Problem and the Solution

No wild animal is undesirable. Yet almost any wild animal can cause damage to crops, be a hazard to aviation, or become a threat to human safety. Deer and smaller mammals can consume newly planted tree seedlings and other crops. Birds in large flocks can decimate grain and sunflower fields. Predators attack livestock and domestic animals. Wild animals can spread diseases such as rabies, West Nile virus, chronic wasting disease, and bovine tuberculosis. Invasive wildlife species can decimate endangered or threatened native species.

NWRC evaluates damage situations and develops methods and tools to reduce or eliminate damage and resolve conflicts. NWRC scientists study birds, mammals, rodents, invasive species, and other wildlife that cause serious but localized damage problems. The Center designs studies to ensure that the methods developed to alleviate wildlife damage are biologically sound, effective, safe, economical, and acceptable to the public. NWRC scientists produce scientific information, appropriate methods, technology, and materials for reducing damage caused by animals. Through the publication of results and the exchange of technical information, the Center provides valuable data and expertise to the public and the scientific community, as well as to APHIS' WS program.



Research on reproductive control of overabundant animal populations, particularly those inhabiting urban or suburban settings such as Canada geese and deer, is a high priority within the WS program. (APHIS photo by John Cummings.)

History and Organization of the NWRC

Established in 1940 under the U.S. Bureau of Biological Survey—the forerunner of the Department of the Interior's U.S. Fish and Wildlife Service—the Center was transferred in 1986 to APHIS as part of the Department of Agriculture's WS program. The Center employs more than 160 scientists, technicians, and support personnel at its headquarters in Fort Collins, CO, and at field stations in several other States. Scientific and support staff, all focused on particular wildlife damage issues, specialize in the following disciplines:

Animal behavior/psychology
Animal care
Archives management
Biology
Chemistry
Computer science
DNA forensics
Ecology
Electronics
Economics
Immunology
Information transfer
Pharmacology
Physiology
Quality assurance
Statistics
Toxicology
Veterinary medicine
Wildlife biology
Zoology

The Center relies on the services of people with additional specialties through extensive cooperative ties with universities, not-for-profit research facilities, and other public and private research entities. NWRC has achieved an integrated, multidisciplinary research agenda that is uniquely suited to provide scientific information and solutions to wildlife damage problems.

Blackbirds annually damage $5 million to $8 million worth of ripening sunflower in the northern Great Plains. (APHIS photo by George Linz.)

Research Activities

With the diverse scientific expertise of its staff and collaborators, NWRC assembles teams that are devoted to finding innovative, cutting-edge solutions to wildlife damage issues. Examples of the diversity of research currently under way at the Center include the following:

- Development and implementation of strategies to manage blackbird damage to agricultural crops in the United States;
- Development of new solutions to control overabundant wildlife populations through biotechnology and immunocontraceptive vaccines;
- Development and evaluation of new techniques to resolve predator depredation on endangered and threatened wildlife, as well as domestic animals;
- Studies of the ecology of coyote depredation;
- Identification of techniques to reduce mammal damage to forest resources;
- Development of integrated pest management strategies to reduce rodent damage to crops and rangeland;
- Development of management strategies to reduce bird predation at aquaculture facilities;
- Registration of chemicals and drugs for use as wildlife damage management agents;
- Analysis of taste and olfaction in selected wildlife species and development of nonlethal chemical repellants for birds and mammals;
- Development of techniques to manage wildlife that pose hazards to aviation;
- Development of chemical control methods to manage the invasive brown treesnake on Guam; and
- Identification of the role of wildlife in disease transmission and development of a variety of techniques to combat the spread of wildlife diseases to livestock, wildlife, and humans.

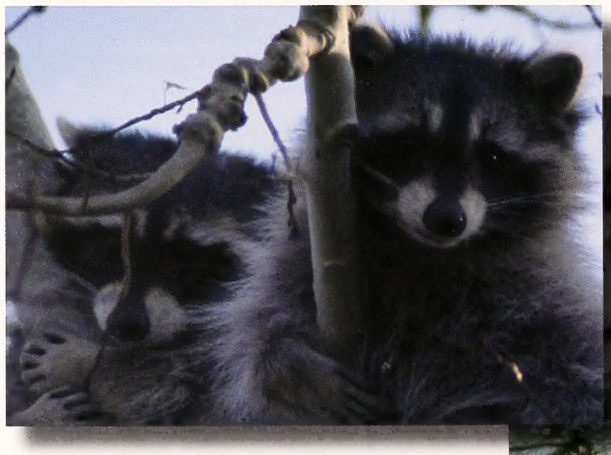
Cooperative Activities

To extend its capabilities for research and training, the Center establishes a number of formal or informal cooperative programs with universities. Our university cooperators include the following:

Colorado State University
Cornell University
Mississippi State University
North Dakota State University
The Ohio State University
The Pennsylvania State University
Queensland [Australia] University of Technology
Texas A&M University–Kingsville
University of Colorado
University of Florida
University of Nebraska
University of Nevada
University of Pennsylvania
University of Wisconsin
University of Wyoming
Utah State University

The Center also partners with numerous State, Federal, and private organizations. Examples of these include the following:

Airline Pilots Association
American Sheep Industry
Catfish Farmers of America
International Association of Fish and Game Agencies
Louisiana Rice Growers Association
Michigan Department of Health
National Sunflower Association
New York Bureau of Wildlife
Texas Sheep and Goat Raisers Association
USDA Forest Service
U.S. Department of Defense
U.S. Federal Aviation Administration
U.S. Fish and Wildlife Service
U.S. Geological Survey
Washington Forest Protection Association
Wisconsin Department of Natural Resources



Wildlife rabies poses significant risks to humans, their livestock and pets, and to wildlife. (APHIS photo by Richard Engeman.)

NWRC scientists are studying alternative methods for reducing wildlife predation on endangered and threatened species, such as the California least tern. (APHIS photo by Ken Tope.)

International Cooperation

To facilitate international exchange of information, the Center cooperates with international organizations. In these cooperative efforts, NWRC scientists develop and test new wildlife damage-management techniques and transfer the wildlife damage-control technology to scientists and technicians in host countries. Center scientists develop methods for reducing severe agricultural damage caused by a variety of rodents, birds, and other vertebrate pests in Latin America, Africa, and Asia.

The Center's international activities develop working relationships with people around the world. (APHIS file photo.)

Conclusion

NWRC is committed to:

- Being responsive to the concerns and values of the public;
- Providing valid, objective scientific information of the highest quality;
- Promoting the welfare of animals and the quality of the environment;
- Encouraging employees' high morale and growth and development;
- Maintaining a quality work environment; and
- Providing equal opportunity for employment and advancement.

Studies conducted at the Center will continue to provide new information to help resolve complex issues related to wildlife damage, human health and safety problems, threatened and endangered species, and invasive species. These studies will help America manage its wildlife resources wisely and effectively into the future.

For additional information on the National Wildlife Research Center, contact

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Our address on the World Wide Web is <http://www.aphis.usda.gov/ws/nwrc>.

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